Newsroom

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Georgia Southern University

Geology student Copeland will present research at Southeastern Section meeting

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When she was a little girl, Jordan Copeland loved to explore the undeveloped woods that bordered her suburban Atlanta neighborhood, and she would spend hours poring over every issue of National Geographic.

'I remember wanting to grow up and be a National Geographic photojournalist," Copeland said. 'I read and re-read all of their magazines after my parents got me a subscription.

'I was especially interested in the articles and photographs involving volcanoes, natural disasters and just about anything else that showed Mother Earth in all her glory."

Years later, Copeland has transformed her love of the great outdoors into the focal point of her education at Georgia Southern University.

For her senior project that is one of the requirements for a bachelor's degree in geology, she has been studying the movement of groundwater and surface water at a location where two rivers meet at Fort Stewart in southeastern Georgia.

Copeland will present her research at the 56th Annual Meeting of the Southeastern Section of the Geological Society of America (GSA), which will be held on March 29 and 30 at the Hyatt Regency in Savannah.

Hosted by the University's Department of Geology and Geography and the Applied Costal Research Laboratory at Georgia Southern, the meeting is expected to attract more than 700 scientists from eight states.

'My investigation seeks to determine whether structural controls are affecting the movement of ground and surface water along a tidally influenced river on the Georgia coastal plain," Copeland said. 'I hope to discover if the arrangement and orientation of rocks in the subsurface is influencing how ground and surface water travel.

'This research is of key importance to the coast because, if we can understand how the subsurface affects the movement of ground and surface waters, we can possibly prevent a negative impact to our water supply due to saltwater intrusion. There is supportive evidence that this contamination is already occurring in Hilton Head, S.C., and Brunswick and Savannah, Ga."

The Coastal Georgia region is a couple of hundred miles from Marietta, Ga., which is where Copeland grew up as what she called 'a major tomboy."

'I'd rather play with the guys than play with dolls," she recalled. 'I was rarely indoors, and explored every creek and trail I could find."

After arriving at Georgia Southern, Copeland signed up for a course called Environmental Geology. It proved to be a life-changing experience for the young student.

'I suppose the moment that I made the connection between my interests and what I wanted to pursue for my career was when I enrolled in that course," she said. 'In addition to covering the basics of geology, it focused on how the knowledge could be used to answer our questions about our planet and all its processes.

'Making that connection in class was what attracted me to geology as a major."

Copeland has been conducting her research under the guidance of James S. Reichard, an associate professor in the Department of Geology and Geography.

'Every professor I've had has gone out of their way to help and encourage me in all of my endeavors," she said. 'It's their caring and supportive attitude that has prompted me to involve myself as much as possible in the department."

Assisted by a $275 grant from the Southeastern Section of the GSA, Copeland has been conducting her research at the convergence of the Canoochee and Ogeechee Rivers.

The spot is located near the perimeter of the Fort Stewart military base, about 35 miles from the coast.

Copeland initiated the project by using a Global Positioning Satellite unit to map the orientation of several tributaries that drain surface water from wetlands that are adjacent to the two rivers.

'I physically walked the tributaries in waders, but I had to stay up on the banks because the area was incredibly muddy, and every step you took, you were knee-deep in the mud," she said.

During the second phase of the project, Copeland installed a series of two different kinds of monitoring wells across a lineament, or natural alignment of geographical features, that is visible in aerial photographs of the area.

'These wells enable me to detect any possible changes in the chemical composition of the groundwater and any changes in the water level in the area," she said. 'Electronic data loggers inside the wells record the height of the water on an hourly basis."

Copeland visits the site on a monthly basis to collect the data. Samples of the groundwater are taken to the University's hydro-geochemistry lab for testing.

'Is groundwater moving along the subsurface features?" Copeland asked. 'Is a river taking a certain path because it's following the surface expression of a fault or the shape of the rocks in the subsurface?
'These are the kinds of questions I'm trying to answer."

For more information on the GSA Southeastern Section meeting,
visit http://www.geosociety.org/sectdiv/southe/07semtg.htm or call Georgia Southern's Department of Geology and Geography at (912) 681-5361.

Scholarship honors memory of Fred W. Hodges

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Students graduating from Bulloch County high schools who plan to attend Georgia Southern University will benefit from a new scholarship created to honor the late Fred W. Hodges. The new scholarship at Georgia Southern will be awarded to outstanding new freshmen from any accredited Bulloch County school, and will be renewable for four years as long as the student remains enrolled as an undergraduate.

'Fred's parents and grandparents believed strongly in education," said his widow, Betty Hodges. 'He also believed in education, so a scholarship is a wonderful way to honor his memory. Although he eventually earned his degree from the University of Georgia, he earned many of his college credits right here at Georgia Southern."

Hodges, a Bulloch County native, died in Oct. 2006. He had been active in the communications industry for more than 30 years with Bulloch Telephone Cooperative and Planters Telephone Cooperative, where he was manager.

'Mr. Hodges was a wonderful co-worker," said Cecile Bolineau, who served as his assistant at Bulloch Telephone. 'He offered encouragement and respect to everyone, especially in the area of education. He was a true southern gentleman. His colleagues at Bulloch Telephone are pleased that a scholarship has been created in his honor."

Hodges operated a farm on land just outside of Statesboro that belonged to his family for more than 200 years. As a lifelong resident, he enjoyed Bulloch County and its history. He was an active member of the First Methodist Church and served a variety of civic organizations including the Jaycees and the Humane Society.

Fred and Betty Hodges met shortly after completing high school. They were married for 57 years and raised a daughter and two sons. During his lifetime, Hodges was instrumental in creating two other scholarships at Georgia Southern University. The third is named the Fred W. Hodges, Jr. Memorial Scholarship.

More information about scholarships for freshman students is available on the Georgia Southern Web site at

http://admissions.georgiasouthern.edu/scholarship_criteria.htm.